EXHIBIT 1

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Page 1
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                 UNITED STATES DISTRICT COURT
                 FOR THE DISTRICT OF DELAWARE
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     BEARBOX, LLC, and AUSTIN
     STORMS,
                                      )
 5
                        Plaintiffs,
 6
                                      )
                                         No. C.A. 21-534-MN-CJB
                -vs-
 7
     LANCIUM, LLC, MICHAEL T.
                                      )
     McNAMARA, and RAYMOND E.
 8
     CLINE, JR.,
 9
                        Defendants.
10
11
                 Deposition of STANLEY A. MCCLELLAN, Ph.D.
12
     taken before CAROL CONNOLLY, CSR, CRR, and Notary Public,
     pursuant to the Federal Rules of Civil Procedure for the
13
     United States District Courts pertaining to the taking of
14
     depositions, at 233 South Wacker Drive, Suite 6300,
15
     Chicago, Illinois, commencing at 9:08 a.m. on the 3rd day
16
17
     of June, A.D., 2022.
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THE WITNESS: It's the time period around this case
which, in my opinion, is relatively compact.

MR. NELSON: Q So the time period from when to
when then? Give me years.

A I think the patent was filed in 2019, right?

- 6 The date of the patent filing -- If you look at the
- of the date of the patent filling -- If you look at the
- 7 timeline there's the date when they started -- when
- 8 Storms started to develop stuff, and there's a date when
- 9 Lancium had product, and there's a date where they
- 10 overlapped, then there's a date when the patent was
- 11 filed. All of that timeframe was fairly compact between
- 12 like 2018 and 2020. It's about a two-year period -- two-
- 13 or three-year period in there.
- 14 Q So is that the time period you used, or did you
- 15 use your understanding as you were doing your -- plain
- 16 and ordinary meaning as you were doing your analysis --
- 17 When you were writing your report, what time period did 18 you use?
- 19 MR. RICORDATI: Objection. Asked and answered.
- 20 THE WITNESS: The time period of the report is early
- 21 2022 which abuts the time period of the activity of the
- 22 patent and stuff. So it's basically all the same time
- 23 period. I don't know that there's any substantial
- 24 migration or substantial changes in any of the terms that

- 1 that much power?
- 2 A Typically it's consume because you're a load
- 3 that's not controllable. If you're a controllable load,
- 4 then you're buying that power with the assumption that

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- 5 you're going to consume it. If you have ability to sell
- 6 it back, then you can sell it back. But you don't sell
- 7 it back to whoever you bought it from, you sell it into a
- 8 market at that time. It's an agreement with the seller
- 9 to consume, right?
- And consume doesn't mean use. Consume means
- 11 purchase. Whether I use that power to do something with
- 12 or whether I sell that power to somebody else, that's
- 13 separate from the power option agreement.
- (14) Q What's your understanding of a minimum power
- 15 threshold in this case as used in the '433 patent?
- (16) A) That's the data that's associated with the
- 17 option agreement.
- 18 Q What specifically is a minimum power threshold?
- 19 A That's the amount of power that you're
- 20 contracted to consume.
- 21 And by consume you don't mean use, correct?
- A I may not use it, but I'm going to consume it.
- 23 I'm purchasing it. Whether I use it or whether I sell
- 24 it, that's a completely separate issue. I'm agreeing to

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- 1 are associated with this patent or with this case. If
- 2 there have been -- if there have been, then we need to
- 3 isolate those and make sure that there wasn't any
- 4 misinterpretation of anything.
- MR. NELSON: Q What's your understanding of the
- 6 plain and ordinary meaning of power option agreement?
- 7 A My understanding of power option agreement is
- 8 it's essentially a contract to buy power at a certain
- 9 price. It's like a wholesale purchase. I'm going to buy

10 X number of units at X price.

- 11 Q What's your understanding of power option data?
- 12 A Power option data is the data that's associated
- 13 with the power option agreement.
- Q What -- is there any specific data that's
- 15 required to be power option data, or can it be anything?
- A I think at least it has intervals and minimum
- 17 thresholds. There may be other data that's associated
- 18 with that, but I think there's thresholds over intervals.
- 19 Q And intervals are intervals of time?
- A Time intervals, yeah.
- 21 Q And what are thresholds?
- 22 A You agree to buy power at that -- you agree to
- 23 consume that much power at a certain price at that time.
- Q You agree to buy that much power or consume

1 purchase it at that threshold.

- 2 Q So just to be clear so our -- Your use of the
- 3 word consume here means -- it doesn't mean physically the
- 4 data center consumes the power by using it. It also
- 5 could mean that the power is sold back.
- 6 A Consume is a transactional thing. Right. The
- 7 consumption is a transaction where I'm consuming it. I
- 8 have to dispatch that power some way.
- 9 Q What do you understand the term performance
- 10 strategy to mean in the context of the claims of the '433
- 11 patent?
- 12 A A performance strategy is deciding -- is a
- 13 decision based on incoming data and conditions and
- 14 monitored conditions as to how to dispatch the -- how to
- 15 dispatch the power that's been consumed through the PPA
- 16 against bitcoin miners or not.
- 17 Q So in your understanding of performance
- 18 strategy could performance strategy be to not consume
- 19 power?
- 20 A It could be --
- 21 Q I'm sorry. Let me -- I asked a bad question
- 22 because I used the word consume in a different context.
- 23 So in your understanding of the term
- 24 performance -- the meaning of the term performance

22 (Pages 82 - 85)

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- 1 strategy, could a performance strategy be a decision for
- 2 the load to not utilize power?
- 3 A As long as it complies with the minimums, yeah.
- 4 Q What minimums must it comply with?
- 5 A The minimum thresholds in the PPA.
- 6 Q If I understood -- if I understood -- You said
- 7 PPA. I think the term from the patent is power option
- 8 agreement.
- 9 A Yeah. That's -- that's --
- 10 Q Are you using the two -- Do you think there's a
- 11 difference between -- Well, between a PPA which -- What
- 12 do you understand PPA to be?
- 13 A I may have just used the wrong term. I meant
- 14 the contracted purchase of power at a certain rate.
- 15 Q Do you understand that the term -- do you
- 16 understand there's such a thing called a power purchase
- 17 agreement?
- 18 A Yeah. I've heard of that.
- 19 Q Do you understand --
- 20 A I think they're essentially the same thing, but
- 21 I'm not exactly sure of the difference.
- 22 Q That was my next question. Is there a
- 23 difference or not that you are aware of?
- 24 A I tend to use them interchangeably, and that

- or 1 A Well, if I purchase one kilowatt at \$1, I'm
 - 2 going to pay that \$1 whether I use that kilowatt or not.
 - 3 Q So the minimum power threshold in that example

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- 4 is the \$1 or the one kilowatt?
- 5 A The power threshold is the kilowatt.
- G Q The minimum power threshold is the kilowatt?
- 7 A Uh-huh.
- 8 O Then what is the dollar?
- 9 A That's the price I paid for the kilowatt.
- 10 Q I'm sorry. I have been misspeaking. Just for
- 11 the record, I may have said '633 patent a few times. Do
- 12 we have an understanding that when we've been testifying,
- 13 I'm using -- the patent in question is the '433 patent.
- 14 A Right.
- 15 Q Your testimony was relating to the '433?
- 16 A Yes, '433 -- the report is relative to the '43
- 17 patent.
- 18 Q And my questions -- You understood my questions
- 19 to be as well?
- 20 A Yes.
- 21 Q Thank you.
- The patent talks about the performance strategy
- 23 may specify a power consumption target for the load. Do
- 24 you have an understanding what the power consumption

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1 may not be exactly right.

- 2 Q So going back to minimum power threshold again.
- 3 Is that -- Do you understand that to be a power threshold
- 4 to be power that must be utilized in the form of the data
- 5 center actually operating and physically using the power,
- 6 or do you understand minimum power threshold to be 7 something else?
- (8) A I'm not -- I'm not sure of all the specifics of
- 9 the contractual arrangement. I think that you're going
- 10 to pay for the power at a minimum power threshold whether
- 11 you use it or not.
- Q So in your view --
- (13) A I don't know if you have to use it or if you
- 14 have to pass it through. You may just not use it, but
- 15 you're going to pay for it no matter what.
- 16 Q So in your view point then the term minimum
- 17 power threshold as used in the '633 patent can be a price
- 18 for power?
- 19 MR. RICORDATI: Objection. Vague.
- 20 THE WITNESS: It's the -- it's the threshold at
- 21 which you're going to pay for power that you've purchased
- 22 in advance.
- 23 MR. NELSON: Q What do you mean by threshold in
- 24 that context?

- 1 target for the load is?
 - 2 A That's the amount of power that you want the
- 3 load to consume.

17 you have to be above.

- 4 Q Going back -- I want to go back to minimum
- 5 power threshold one more time. So what do you understand
- 6 the word threshold to mean in minimum power threshold?
- A In general a threshold is an amount or a value
- 8 that's called out specifically, and you observe whether
- 9 you're crossing it, whether you're under it, over it, or
- 10 crossing it in northbound or a southbound direction. So
- 11 threshold is a value that's a form of target, but it's
- 12 not necessarily a form of target that you want to meet.
- 13 It may be a target that you want to avoid.
- 14 Q In the context of the '433 patent, is it a
- 15 target that you want to meet or avoid or both?
- 16 A It's a minimum threshold, so it's a target that
- 18 Q If I understand your -- rest of your testimony,
- 19 it's a target that you have to be above, and you can --
- 20 according to your understanding of the plain and ordinary
- 21 meaning, you can be above that target by either using the
- 22 power -- physically consuming the power or consuming the
- 23 power by selling it back, is that correct?
- 24 MR. RICORDATI: Objection. Mischaracterizes the

Page 90 Page 92 1 it's used in the '433 patent, you can either consume the 1 testimony. MR. NELSON: Q Do I understand your testimony 2 power, meaning physically use it to run bitcoin miners, 3 for example, or consume the power to -- in the form of 4 A Well, I think this is actually a better 4 selling it back, and minimum power threshold encompasses 5 question for Mr. McCamant. The power option agreement is 5 both of those scenarios in its plain and ordinary 6 an agreement to purchase a certain amount of power at a 6 meaning, is that correct? 7 certain time at a certain price. I don't know if you're A The minimum power threshold is the contracted 8 required to dispatch that power or if you can just not 8 amount that you're going to pay for regardless of -- I 9 use it. But I know that you're going to pay that price 9 don't think you have to use it, but regardless of whether 10 no matter what, because you have got the contract. 10 you use it or not. For example, I could contract -- and 11 You're contractually obligated to pay for the power at 11 I believe this is correct -- but, again, this is a 12 that price at that time. I don't know if you have to 12 question for McCamant. We'd have to look at the 13 dispatch it. 13 specifics of the purchase agreement. If I have one light bulb, I could buy one Q Well, you are the person who is providing 15 opinions in this case whether Mr. Storms conceived the 15 kilowatt hour for today at noon and I could use that 16 inventions of the '433 patent, and you are the person who 16 kilowatt hour to run that light bulb. Or -- and I'm 17 is applying the claim language in the plain and ordinary 17 going to pay for that kilowatt hour no matter what. Or I 18 meaning as you understand that claim language to the 18 can turn that light bulb off, and I'm still going to pay 19 claims of the patent. So my question to you is -- going 19 for that kilowatt hour. Or I could screw in five light 20 bulbs and I could use more than that one kilowatt hour, 20 back again, is the minimum power threshold, is that 21 something that must be utilized by the data center in the 21 and I'm still in compliance with that contract. But I've 22 form of it's actually physically being consumed by the 22 got to pay for that one kilowatt hour, one kilowatt hour 23 data center, or may it -- may a minimum power threshold 23 that I contracted for. But I don't know the specifics of 24 also be something that is utilized in the context of 24 the contract to get in anymore detail than that. Page 93 Page 91 1 selling -- is consumed by selling it back? Q So the claims also use the term set of A The minimum power threshold -- this is a 2 computing systems, correct? 3 business question really. The minimum power threshold --A Uh-huh. What's the meaning of set of computing systems? Q This is a claim -- This is a claim construction 5 question relating to your understanding of the plain and A That's computing systems, more than one because 6 ordinary meaning of the claim terms as you have applied 6 it's a set. Devices that do some sort of computational 7 them. So please answer the question in that context. 7 something, and there's more than one of them. MR. RICORDATI: Objection. Asked and answered and 8 Q The claim uses the term monitor a set of 9 argumentative. 9 conditions. What does monitor mean? 10 THE WITNESS: Yeah. I think I was talking and he A Monitor means observe. 11 11 talked over me. Q At any particular time? Always? Once? 12 Fundamentally it's a business question because 12 A I think the implicit meaning there is that you 13 you've purchased that power sometime in advance and you 13 monitor over time, because if you only monitor something 14 purchased it to use it at a certain time, and you're 14 once, you're really not monitoring it. You made one 15 going pay for it. So it's a business liability. Whether 15 observation. Monitor means multiple observations. 16 you use the -- whether you have to use the power or not, Q So the claim -- I'll refer to Claim 4 -- If you 17 I'm not sure exactly what the requirements are in the 17 need to look at the patent, I can give you the patent too 18 contract, but you're going to pay for it. So you can use 18 to answer this question because --19 it or you can just do nothing and still pay for it. 19 A I can find it in here, I guess. 20 Right. That's -- that's -- that's the structure of the 20 Q You may be able to, but you may not for a 21 '433 patent. 21 couple of these. 22 MR. NELSON: Q Right. So -- so let me make sure I 22 A Okay. It would be helpful to have a copy of 23 understand. So to meet the -- the meaning of the claim 23 it.

24 (Pages 90 - 93)

Q Let me give a copy U.S. Patent No. 10,608,433

24 element minimum power threshold, in your understanding as 24

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- 1 long it would take Mr. Storms' miners to turn off from --
- 2 if they were instructed to turn off from an on state, how
- 3 long it would take them to turn off?
- 4 A You mean -- you mean for the PDU to turn them
- 5 off?
- 6 Q Yeah.
- 7 A That would be instantaneous.
- 8 O So from --
- 9 A The PDU -- if the power is taken away, the
- 10 computer shuts down almost immediately unless it has a
- 11 battery backup.
- 12 Q Did you consider how long it would take the
- 13 miners to come back up if they were -- if they were in an
- 14 off state and turned -- and put into an on state?
- 15 A That gets into the situation that we were
- 16 talking about before with computer systems. Right.
- 17 Depends on this, depends on that, depends on the other
- 18 thing. And if you -- if you -- if you turn a computer
- 19 system off in a nongraceful fashion, then how long it
- 20 takes for it to come back up is an it-depends question,
- 21 and we have doing down the rat hole of what a computer
- 22 system is.
- 23 Q And did you -- in the context of your analysis
- 24 of Mr. Storms' system turning bitcoin miners off and on,

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- 1 did you consider how long it would take his system to
- 2 turn bitcoin miners on if they were in an off state?
- 3 A Well, to turn them on would be instantaneous.
- 4 To make them operational would depend on all of these
- 5 other conditions.
- 6 Q By turn them on, I mean make them operational.
- 7 A Get them where they can mine bitcoin? Depends,
- 8 depends, depends what operating system -- you out of 9 juice?
- 10 THE VIDEOGRAPHER: I have five minutes left.
- 11 THE WITNESS: So it depends what's the operating
- 12 system, what's the disk structure, what kind of
- 13 activities is it contained in, what's the cache
- 14 structure, depends, depends, depends.
- 15 MR. NELSON: Q I understand that.
- 16 A I can't answer that question.
- 17 Q My question is, did you consider that in your
- 18 analysis? I don't see that in your report. Did you
- 19 consider how long it would take them from being -- from
- 20 an off state to being turned on to actually becoming
- 21 operational? Did you consider that in your analysis of
- 22 his system?
- 23 A No, I don't think -- it doesn't have a bearing
- 24 on the approach here. The objective is to have -- I

Page 152 1 think his simulation had 272 miners or something like

- 1 units his simulation had 272 inities of something like
- 2 that. You know, if a few of them -- they're not all --
- 3 even if they're all turned off gracefully, they're not
- 4 all going to come up in the same way at the same time.
- 5 So there's just -- there's no good answer to that
- 6 question.
- 7 Q Well, my question was did you consider it in
- 8 your analysis.
- 9 A I considered it, and I thought well, you know,
- 10 there's too many outstanding variables on that.
- 11 MR. NELSON: Why don't we take a break. You can
- 12 change tapes?
- 13 THE VIDEOGRAPHER: The time is 1:39 p.m. This is
- 14 the end of media unit 2 and we're going off the video
- 15 record.
- (Off the record)
- 17 THE VIDEOGRAPHER: The time is 1:52 p.m. This is
- 18 the beginning of media unit 3, and we're back on the
- 19 video record.
- 20 MR. NELSON: Q So going back to page 66 of your
- 21 report.
- 22 A Okay. Page 66 or paragraph --
- 23 Q Paragraph 66.
- 24 A Yes. Got it.

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- 1 Q So what portion of paragraph 66 addresses the
- 2 claim language wherein the performance strategy comprises
- 3 a power consumption target for the set of computing
- 4 systems?
- 5 A Power consumption target. I think it's -- it's
- 6 associated with current power usage and expected future
- 7 power usage.
- 8 Q So is -- so is one of those the power
- 9 consumption target?
- 10 A Yeah, I think so. There's the -- there's
- 11 the -- there's the power threshold for the time intervals
- 12 and current power usage and energy price conditions. So
- 13 the current power usage would essentially be the target,
- 14 and expected future power usage would be the estimated
- 15 future target.
- 16 Q And how is the associated power threshold
- 17 utilized, if at all, to determine the expected future
- 18 power usage?
- 19 A Well, the power threshold -- if you're assuming
- 20 that the data is coming from a market system, then the
- 21 power threshold is the minimum amount of power that
- 22 you're bound to pay for or consume.
- 23 Q By consume you mean use or sell back, right?
- 24 A Well, again, it depends on -- There's several

39 (Pages 150 - 153)

Page 154 Page 156 1 different things going on here, right. There's the 1 and I'm trying to draw the distinction between the two. 2 patent language and there's the business of making the 2 The contract language may not make you use the power. Q) Well, the term power option agreement is in the 3 contract with the service provider, and I think those two 4 things are separated somehow. For example, if you have a 4 claim, so it has a legal meaning per the claim. What do 5 wind turbine, you have a contract with the service 5 you understand the legal meaning of power option 6 provider, and if they're not going to take the power, you 6 agreement to be? 7 shunt it to ground. But -- so they don't have to take A I don't know if power option agreement means 8 the power, but --8 that you must consume -- you must expend the power that Q Well, we're focused on the patent. 9 you're contracted to buy. I can't answer that. That's 10 again -- that's a question for McCamant because that's a A You understand what I'm saying? So the patent 11 language -- If you go back to the patent language, it 11 business -- that's ERCOT marketplace business thing. 12 says receive power option data based on an option Q So when you did your analysis of the claim 13 agreement. So there's a contract that's giving you the 13 language, did you apply a plain and ordinary meaning of 14 data, and the power option data specifies time intervals 14 power option agreement as it's used in the patent in the 15 with thresholds, and the power -- the minimum power 15 context of your analysis? 16 threshold is associated with each time interval. So A It says receive power option database at least 17 there's time intervals that have thresholds that are 17 in part on a power option agreement where the power data 18 associated with them, and the thresholds are minimum 18 specify a set of minimum power thresholds. Right. So 19 power that you're bound to consume. You have paid for, 19 the minimum power thresholds means you must be capable of 20 you're going to pay for. 20 consuming that. I don't -- What I'm saying is I don't Q And -- So we talked about this earlier, bound 21 know if it means that you must consume that. You must be 22 to consume means you can either use it by running miners 22 capable of consuming that. 23 or not use it by selling it back, is that right? 23 Q I understand that. But --A Well -- Let's look. Claim 1 says wherein --24 24 A Those are two different things. Page 155 Page 157 1 power consumption target -- you're talking about Q Do you know -- did you in your analysis 2 determine a plain and ordinary meaning of the word power 2 targets -- for the set of computing systems for each time 3 option agreement -- the phrase power option agreement as 3 interval in the set of time intervals wherein each power 4 used in the patent? 4 consumption target is equal to or greater than the 5 minimum power threshold. So the patent doesn't (A) The phrase power option agreement to me in my 6 interpretation means options for buying power ahead of 6 contemplate selling back at all. It talks about 7 time. To me means that's the plain and ordinary meaning 7 consuming that minimum power threshold by those computing 8 of it, opting to purchase power ahead of time at a 8 devices. I mean, it's -- I just read the claim language 9 certain rate and then I'm going pay for that power, and 9 there. It says: Minimum power consumption target 10 wherein each target is equal to or greater than the 10 then when it comes for that time I'm going to pay for 11 that power whether I use it or not. There's a secondary 11 minimum power threshold associated with the time 12 condition which says -- where I'm drawing a distinction, (13) Q So earlier on I had asked you a question what 13 I don't know if you're bound to use that power. Do you 14 about the plain and ordinary meaning of minimum power 14 understand what I'm saying? I'm going to pay for that 15 threshold was, and you said it was the power that could 15 power, that's the option. When it comes time, I'm going 16 to pay for that whether I use it or not. I don't have to 16 either be consumed -- that could be consumed either by 17 use it. I can screw in that light bulb and turn off the 17 using it or by selling it back. So -- Are you changing 18 the definition? 18 switch, and I'm still paying for that minimum power.

Q And I think you pointed to go -- go to the

Q So let's go back -- I think in connection with

20 paragraph 62 I had asked you some questions about where 21 -- where the code received the minimum power threshold

22 data. Do you remember that?

A Yes.

23

24

A No. I'm saying in the power option agreement,

20 I believe I said it's not clear to me whether the power

23 times. I don't know about the contract -- there's a

24 contract, and then there's this language in the patent,

21 option agreement mandates that you use the power. That's22 a question for McCamant. I believe I said that several

1 appendix on page 94.

- 2 A Yes.
- Q I think you pointed to bullet point 5 as 3
- 4 providing more information on that.
- A I believe that's where it is, yeah.
- Q So where in bullet point 5 does it identify
- 7 what -- where specifically the power option -- the
- 8 minimum power threshold data is in the code?
- A Well, it talks about the load and the break 10 even power price.
- Q But neither one of those is minimum power
- 12 option data? I'm sorry. Neither one of those is a
- 13 minimum power threshold, is it?
- 14 MR. RICORDATI: Objection. Mischaracterizes the
- 15 testimony.
- 16 THE WITNESS: Well -- I believe that the break even
- 17 power price includes the minimum power threshold.
- MR. NELSON: Q The break even power price is a
- 19 price, it's not a minimum power threshold, is it?
- A I'm opting to buy the power ahead of time for a
- 21 certain amount of money and it's a certain amount of
- 22 power. Comes time for that power to be used and paid
- 23 for, I can stick it in my light bulb, I can stick it in
- 24 my bitcoin miners. If I stick if in my bitcoin miner, it

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- 1 less detailed. So if you want ultimate detail, you have
- 2 to keep going down.
- Q So -- But the report is your opinions, and if I
- 4 want to find out what the actual minimum power threshold
- 5 that Mr. Storms' system allegedly uses, if I want to find
- 6 out what that is, I can't find that out from your report,
- 7 I've got to actually look at the code?
- A Right. Because the report summarizes the code.
- 9 The report doesn't include the code. The report includes
- 10 the code by reference with these summaries. Right. So
- 11 it gives you a hunt as to where you'd have to look. It
- 12 looks like you'd look at arb_main_AEC, which is BBSC 016,
- 13 and then you go to 016, line 63 through 69, and then you
- 14 go to 016, lines 15 and 16. And that's probably where
- 15 that would be if you were looking for it. So it gives
- 16 you a really efficient cross-reference to go quickly into
- 17 where the thing is that you're looking for in the code.
- 18 I mean, it's not possible to list every variable name and
- 19 every function call and every bit of code.
- 20 Q So if -- Let me ask you this. If prior to
- 21 Mr. Storms' system, if a company developed a system that
- 22 was capable of turning individual miners on and off
- 23 within a group of miners, taking into account multiple
- 24 variables to determine what strategy should be based on

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- 2 enough money to get me past the cost of that power and
- 3 maybe a couple of other things to make a break even. So
- 4 the minimum power threshold is built into that break
- 5 even.
- 6 Q I understand your belief that it's built into
- 7 the calculation. My question is, where in this bullet
- 8 point does it actually tell me what the minimum power
- 9 threshold is?
- 10 A It doesn't tell you specifically in the bullet
- 11 point. I believe what I said before was we'd have to go
- 12 back -- if you want to find the name of the variable or
- 13 whatever, we're going to have to go directly into the
- 14 code and find that. This kind of gives us a hint as to
- 15 where it would be.
- Q So your report doesn't identify specifically
- 17 where the minimum power threshold is in Mr. Storms'
- 18 system, I have to go to the code to actually find that?
- A Yeah. I mean, my approach to doing these
- 20 reports like this, like I explained before, is the code
- 21 is down here and it's got all the detail. There's a
- 22 first level which is the module descriptions that have a
- 23 little more detail, then there's the second level which
- 24 is the stuff that's inserted in the body, which is even

- 1 might make me some money. The bitcoin miner has to make 1 what the strategy should be, i.e., to turn the miners off
 - 2 and on, based on a company's business strategy, would
 - 3 such a system be the same as the Bearbox system?
 - MR. RICORDATI: Objection. Vague. 4
 - 5 MR. RICORDATI: Q I can ask that slower if it was
 - 6 too quick.
 - 7 A Yeah, please.
 - Q So, hypothetically, if prior to Mr. Storms'
 - 9 system a company developed a system that was capable of
 - 10 turning individual cryptocurrency miners on and off
 - 11 within a group of miners, and in doing so took into
 - 12 account multiple variables to determine the strategy
 - 13 should be based on whatever the company's business
 - 14 strategy was, so it could be to turn the miners on and
 - 15 off, to arb power, to do whatever, would that be
 - 16 Mr. Storms' system?
 - 17 MR. RICORDATI: Objection. Vague.
 - 18 THE WITNESS: I believe Mr. Storms' system to be
 - 19 capable of doing that. And additional things.
 - 20 MR. NELSON: Q Well, my question -- well, my
 - 21 hypothetical -- would that be Mr. Storms' system?
 - 22 MR. RICORDATI: Same objection.
 - 23 THE WITNESS: No. Mr. Storms' system would be
 - 24 capable of doing that, but it would do more.

Page 234 Page 236 1 least that much, regardless of whether they're losing 1 context? A Well --2 money doing it or not.

3

- Q You're a bitcoin miner --
- A I mentioned earlier that I was a little bit
- 5 fuzzy about what the day-ahead LMP revenue column
- 6 actually means. I mean, the other ones jump right out.
- 7 The day-ahead LMP revenue seems to be calculated dollars.
- 8 It's revenue, so it's dollars based on the day-ahead LMP
- 9 column because it's day-ahead LMP. I'm not exactly sure
- 10 how the revenue number is derived from the day-ahead LMP.
- 11 It would take a little bit of reading between the lines
- 12 to figure that out. It's probably -- it's probably based
- 13 on some of the characteristics that are contained on 91.
- Q So looking back at all of this -- the materials
- 15 here in Exhibit 204, do they teach a person of ordinary
- 16 skill that the bitcoin mine -- that the bitcoin mine must
- 17 utilize a specific amount of power? By utilize I mean
- 18 actually use to mine -- to mine bitcoins.
- A Well, they say that if you use that power to
- 20 mine bitcoin on that date using those mining numbers, you
- 21 would make that much money.
- Q But is there a requirement that the bitcoin
- 23 mine here that's being depicted and that's being
- 24 simulated must use a certain amount of power regardless

4 breakeven mining cost. Q But that's -- the breakeven mining cost is

A Well, that's the break -- that comes from the

- 6 telling you whether it makes sense to mine or not mine?
- That's where the power threshold comes from.
- Right.
- That's the minimum power threshold.
- But it -- but is there a requirement that
- 11 regardless of what that breakeven cost is, it could be
- 12 negative, that the system still must use X amount of
- 13 power, even if they're losing money mining bitcoin doing
- 14 it?
- 15 Why would you mine bitcoin to lose money?
- 16 I'm asking --
- That doesn't make any sense. This doesn't

18 teach that.

- 19 This does not?
- 20 A Because if you're trying to mine bitcoin to
- 21 lose money, why do it this hard way? I can think of
- 22 easier ways to lose money.
- 23 Q Does the system teach a performance strategy
- 24 based on that the system must use X amount of power,

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- 1 of what -- whether it's profitable to do so or not?
- A Well, this system is -- like we discussed
- 3 previously, this system is set up -- and I believe he's
- 4 running this full open. So this is with a fully
- 5 populated system running full open, and if you did that,
- 6 based on these power prices and those bitcoin prices,
- 7 that's how much money you would make. So if you wanted
- 8 to make less money than that, you could run less miners.
- Q That's not my question. My question is,
- 10 regardless of profitability, does this system teach that
- 11 the miners must consume a minimum amount of power, somel 1 the miners, even it's -- even if they're losing money
- 12 amount that's more than zero, regardless of whether it's
- 13 profitable to do so?
- 14 MR. RICORDATI: Object to form.
- 15 THE WITNESS: It appears to teach that if you use
- 16 the power that you've pre-purchased you must make at
- 17 least that much money that's talked about in the
- 18 breakeven mining cost.
- 19 MR. NELSON: Q That's not my question. My
- 20 question is, under the system that's discussed --
- 21 described in Exhibit 204, is there any teaching that the
- 22 -- the bitcoin mine must use a certain amount of power
- 24 example. Can you use more? But that it must use at
- 23 for a certain time period? Let's say 50 megawatts as an

- Page 237 1 again, regardless of whether it's profitable to do so or
- 2 not?
- A Must -- Well, that again goes back to the
- 4 breakeven mining cost, you must use that much power to
- 5 break even for mining.
- Q Right. But that's -- again, that's calculating
- 7 whether you're going to make money or not. I'm saying
- 8 regardless of profitability, does the system teach a
- 9 performance strategy that is based on using at least X
- 10 amount of power, that must be -- that must be utilized by
- 12 doing it?
- 13 A The assumption in the simulation here is that
- 14 when the miners are operating, they're consuming the
- 15 amount of power that's contracted.
- 16 Q But we've talked about -- I don't want to use
- 17 the word consuming because consuming --
- 18 They're using --
- 19 They're using as in mining or --
- 20 A Yeah. Those systems are using -- well, this is
- 21 a side-by-side simulation. That's one of the nice things
- 22 about simulation. Right. It's as if you did both things
- 23 at the same time, right? So if you were to go down this
- 24 path and use that power to do mining, you would get this

Page 238 1 much money. If you were to stop mining at certain times,

- 2 you would get this much money. So which one do I use?
- 3 That's a performance strategy. At this time I turn on
- 4 the miners, at that time I turn off the miners, and there
- 5 may be areas in between where I modulate how much mining 5 this case?
- 6 I do.
- 7 Q Okay. That's not my question. My question is,
- 8 does this system contemplate a performance strategy where
- 9 X amount of power must be utilized by the miners, they
- 10 must mine and use X amount of power, regardless of
- 11 whether or not it's profitable for the miners to do so?
- 12 MR. RICORDATI: Object to form.
- 13 THE WITNESS: That's the breakeven mining cost.
- 14 That's associated with the breakeven mining cost. The
- 15 simulation kind of ignores that -- I'm going to say just
- 16 for a second nonsensical case, right, because why am I
- 17 mining bitcoin to lose money. So let's call that --
- 18 MR. NELSON: Q Well, I'm -- that's my --
- 19 A That's the wrong terminology for it. This
- 20 simulation ignores that case, because it's focusing on
- 21 ways to make positive dollars by choosing a performance
- 22 strategy that enhances the choice of mining versus sell
- 23 back.
- 24 Q No. And I understand that, but my question is

- Page 240
- 1 Q Do you know what base point information is?
- 2 A I think -- In terms of a power system?
- 3 Q In terms of your opinions.
- 4 A In what context? In terms of opinions with
- 7 A I don't think -- I don't know if that terms has
- 8 showed up. It may, but I don't recognize it right
- 9 offhand.
- 10 Q So go to paragraph 285 of your report.
- 11 A 285?
- 12 Q Yes.
- 13 A Yes.
- 14 Q So what's a base point?
- 15 A It says that the base point is the minimum
- 16 required power usage value which corresponds to the
- 17 claimed minimum power thresholds.
- 18 Q And how does that correspond to the claimed
- 19 minimum power threshold?
- 20 A That's the amount of power that you need to use
- 21 or need to pay for depending on how the contract is
- 22 structured.
- 23 Q So that's what the base point is or that's what
- 24 the minimum power threshold is?

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- 1 focused on what you call the nonsensical strategy, which
- 2 I think probably answers my question. So the system
- 3 doesn't contemplate a performance strategy where the
- 4 system must run, must consume X amount of power,
- 5 regardless of whether they're going to make money
- 6 consuming that X amount of power or not consuming it?
- 7 MR. RICORDATI: Objection to form.
- 8 THE WITNESS: I believe that's -- I'm sorry. As
- 9 I've said, I believe that's built into the breakeven
- 10 mining cost.
- 11 MR. NELSON: Q How?
- 12 A That's -- I believe that that's the amount of
- 13 -- if you use the minimum amount of power, that's the
- 14 cost per power unit that you'd have to achieve. Anything
- 15 below that, you're losing money. Anything above that,
- 16 you're making money. That's why it's break even.
- 17 Q Let's say that you have -- I'll leave it at
- 18 that.
- 19 So in calculating the breakeven price and the
- 20 respective realized revenues, do you know if that's done
- 21 on the power prices being zonal power prices or nodal
- 22 power prices?
- 23 A I don't know. It's a day-ahead LMP. It
- 24 doesn't qualify the day-ahead LMP more than that.

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- 1 MR. RICORDATI: Objection. Mischaracterizes the
- 2 testimony.
- 3 THE WITNESS: It corresponds to the minimum power
- 4 threshold. So that's the base utilization value.
- (5) MR. NELSON: Q That's what I'm trying to figure out
- 6 what you mean. You say it corresponds to it. What does
- 7 that mean?
- 8 A Well, I think the power thresholds are power --
- 9 this goes back to the discussion earlier about using
- 10 power versus paying for power. You have to pay for the
- 11 power. If you do one of these option agreements, you
- 12 have to pay for the power whether you use it or not.
- 13 It's not clear to me whether you're required to use it.
- 14 It's clear to me that you have to have the capability of
- 15 using it, otherwise, you couldn't stroke the contract,
- 16 but it's not clear to me -- because this is a question
- 17 for Mr. McCamant, it's not clear to me if you have to
- 18 consume that power because if you didn't consume that
- 19 power, that just leaves a little bit of surplus, but
- 20 that's okay, because they got paid for it.
- So it makes me think that the minimum power
- 22 thresholds are something you commit to pay for and
- 23 something that you can use, but not something that you
- 24 must use.

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- 1 Q My question was relating to base points though.
- 2 Does the base point come from the independent system
- 3 operator?
- 4 A It says it comes from the QSE.
- 5 Q And does it ultimately come from the
- 6 independent system operator? Do you know or not know?
- A Well, the OSE is a function of -- is a
- 8 marketplace. It's associated with the ISO. So I see
- 9 them as kind of the same thing. Again, this is a -- this
- 10 is an ERCOT question. I don't know the specifics of
- 11 this.
- 12 Q Okay. Do you know how the base point is
- 13 determined?
- 14 A Power systems have a base load that they expect
- 15 to be able to fill, and they have to purchase that
- 16 power -- at least that much power to service that base
- 17 load, and if they go -- if they have power requirements
- 18 that go beyond the base load, then they have to go to
- 19 reserves. I think that the base point is your element of
- 20 that base load. Right. If you bid into the marketplace
- 21 at minimum power thresholds, that's the base -- that's
- 22 the element of the base load that you've committed to
- 23 take if you have to.
- 24 Q Do you know how it's determined whether a

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- 1 MR. RICORDATI: Objection. Asked and answered.
- 2 THE WITNESS: I -- I -- I don't know the specifics.
- 3 I know that there's a minimum power threshold as we've
- 4 discussed.
- 5 MR. NELSON: Q So go to paragraph 298.
- 6 A Yeah
- Q And the second -- the second sentence reads:
- 8 The .CSV file also described and/or explained how to
- 9 determine a generated mining revenue figure to be expect
- 10 from using power to mine bitcoin, a realtime LMP revenue
- 11 figure based on selling energy to the grid at the current
- 12 realtime energy price, a day-ahead LMP revenue figure
- 13 based on selling energy to the grid in the future at the
- 14 day-ahead energy price, and a realized revenue figure
- 15 that represented the most profitable of the other three
- 16 revenue figures.
- 17 Do you see that?
- 18 A Yes.
- 19 Q So aren't options two or three mutually
- 20 exclusive of each other, that you either sell -- you'd
- 21 either sell realtime revenue based on selling energy to
- 22 the grid at the current realtime energy price -- Strike
- 23 that.
- I'm going to ask you the same question I asked

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- 1 company would receive base point information from a QSE?
- A I don't know. I assume that's a -- once you --
- 3 once you -- once you stroke that contract to be able to
- 4 do power options, then you're qualified to soak that load
- 5 and you can get the information.
- 6 Q You say assume. Do you know or not?
- 7 A I think that's how it works, but I'm not an
- 8 expert in this. We have to talk to Mr. McCamant about
- 9 that.
- 10 Q Do you know if Mr. Storms' simulation
- 11 contemplating -- contemplated receiving base point
- 12 information?
- 13 A I don't know. It talks about day-ahead pricing
- 14 and realtime pricing. I mean, it talks about if base
- 15 point is a minimum required power usage, then that
- 16 corresponds to a minimum power thresholds, then we've
- 17 already discussed the fact that you can back into the
- 18 minimum power thresholds from his data.
- 19 Q So my question was, do you know if Mr. Storms'
- 20 system received or was -- simulation was capable --
- 21 Strike that.
- 22 Do you know if Mr. Storms' system contemplated
- 23 receiving base point information, yes or no? Do you
- 24 know?

1 you before. I'm not sure if it's going to be any

- 2 different. I'm still trying to figure out what option
- 3 the third option means there, a day-ahead LMP revenue
- 4 figure based on selling energy to the grid in the future
- 5 at the day-ahead energy price. Why would you do that?
- 6 A That's the column in the table that I think is
- 7 confusing. I think that column is kind of -- kind of
- 8 sets a lower bound that really is kind of not very
- 9 useful. I think the day-ahead -- the day-ahead column in
- 10 the table -- Okay. So I bought -- I bought the power
- 11 day-ahead at this price per kilowatt or per megawatt or
- 12 whatever. What if I just turned around and sold it at
- 13 exactly that price and ignored the realtime price? Oh,
- 14 that would be -- that would be if I wanted to make zero
- 15 money.
- 16 Q Well, sitting here today, can you explain to me
- 17 how the third option here, which is the day-ahead LMP rev
- 18 column, how that -- how that's calculated or even what it
- 19 means?
- 20 A That's using the day-ahead energy price and
- 21 multiplying that by the amount of energy -- day-ahead
- 22 energy price -- Let me look at the table. That's why
- 23 that table -- that element of the table is confusing to
- 24 me. I don't -- I think that's -- I think the day-ahead

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	Page 290		Page 292
1	A We discussed several different points that	1	STATE OF ILLINOIS)
2	that I asked about that I thought were potentially needed) SS:
	to be cleaned up or needed to be discussed, and then we	2	COUNTY OF C O O K)
4	discussed those at least those three questions those	3	
	three concepts. We didn't discuss the question. We	4	The within and foregoing deposition of the
	discussed the concept.	5	aforementioned witness was taken before CAROL CONNOLLY,
7	Q What did you discuss about the concepts?	6	CSR, CRR and Notary Public, at the place, date and time
8	A Well, the first question the first question	7	aforementioned.
9	· · · · · · · · · · · · · · · · · · ·	8	There were present during the taking of the
10		9	deposition the previously named counsel.
	the report and the appendix, and he said he was going to	10	The said witness was first duly sworn and was
12	go back over the minimum power threshold and the load	11	then examined upon oral interrogatories; the questions
	specification.	12	and answers were taken down in shorthand by the
14	The second question I don't even remember		undersigned, acting as stenographer and Notary Public;
	the second question at this point.		and the within and foregoing is a true, accurate and
16	Can you read it back?		complete record of all of the questions asked of and
17	Q It was a question about being above a		answers made by the forementioned witness, at the time
'	threshold.		and place hereinabove referred to.
19	A Yeah. He asked me about When I said it was	18	The signature of the witness was not waived,
20			and the deposition was submitted, pursuant to Rule 30 (e)
21			and 32 (d) 4 of the Rules of Civil Procedure for the
	at a specific power threshold rather than above or below		United States District Courts, to the deponent per copy of the attached letter.
	a specific power threshold, and I said I thought that	23	of the attached letter.
	that's what I had described earlier.	24	
24		24	
	Page 291	1	Page 293 The undersigned is not interested in the within
1	MR. NELSON: No further questions.	$\frac{1}{2}$	_
2	THE VIDEOGRAPHER: Okay. The time is 6:15 p.m.	3	• • •
3	,	4	
	deposition of Dr. Stan McClellan. And we're going off	5	6th day of June, A.D. 2022.
١.	the video record.	6	
6	Thank you, Dr. McClellan.	7	/ ' / /
7	(Off the record)	^	Carol Courolly
8		9	CAKUL CUNNULLI, CSR, CRR
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